



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/662,822	09/16/2003	Frank G. Hughes	08350.0676	1099
58982	7590	08/01/2006	EXAMINER	
CATERPILLAR/FINNEGAN, HENDERSON, L.L.P. 901 New York Avenue, NW WASHINGTON, DC 20001-4413			CHANG, CHING	
			ART UNIT	PAPER NUMBER
			3748	

DATE MAILED: 08/01/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/662,822	HUGHES ET AL.	
	Examiner	Art Unit	
	Ching Chang	3748	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) Responsive to communication(s) filed on 19 May 2006.
- 2a) This action is FINAL. 2b) This action is non-final.
- 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) Claim(s) 1,7,11,13,15,16,18 and 21-27 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) Claim(s) _____ is/are allowed.
- 6) Claim(s) 1,7,11,13,15-16, 18, and 21-27 is/are rejected.
- 7) Claim(s) _____ is/are objected to.
- 8) Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) The specification is objected to by the Examiner.
- 10) The drawing(s) filed on _____ is/are: a) accepted or b) objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) All b) Some * c) None of:
 1. Certified copies of the priority documents have been received.
 2. Certified copies of the priority documents have been received in Application No. _____.
 3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) Notice of References Cited (PTO-892)
- 2) Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____.
- 4) Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) Notice of Informal Patent Application (PTO-152)
- 6) Other: _____.

DETAILED ACTION

This Office Action is in response to the request for reconsideration filed on 05/19/2006.

Claim Rejections - 35 USC § 112

1. Claims 21-27 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention.

More specifically, " to abut side surfaces of adjacent rocker arms " after " adapted " in claims 21, 24, and 27 is new matter.

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. ***Claim 1 is rejected under 35 U.S.C. 102(b) as being anticipated by Wells et al. (US Patent 4,655,177).***

Wells discloses a cylinder head (12) for an internal combustion engine, the cylinder head comprising: a top deck (See Fig. 1); and at least one integrally cast rocker shaft pedestal (24) including a top surface, wherein the top deck is in a same plane as the top surface of the at least one rocker shaft pedestal (See Fig. 1); wherein the at least one rocker shaft pedestal includes a pair of opposed sidewalls adapted for correctly spacing adjacent rocker arms (42) on each side of the pedestal.

5. ***Claims 21, 24, and 27 are rejected under 35 U.S.C. 102(b) as being anticipated by or, in the alternative, under 35 U.S.C. 103(a) as being obvious over Wells et al. (US Patent 4,655,177).***

Wells discloses a cylinder head (12) for an internal combustion engine, the cylinder head comprising a top deck (See Fig. 1) and at least one integrally cast rocker shaft pedestal (24), the pedestal comprising: a substantially flat top surface (part of 24) adapted to abut a flat (part of 36) of a rocker shaft assembly (10); wherein the top surface of the pedestal is in the same plane as the top deck (See Fig. 1).

Wells further discloses that the opposed outer side walls of the said pedestal have substantially flat portions (See Fig. 1). Accordingly, it would have been obvious to one having ordinary skill in the art at the time the invention was made to have utilized the said flat portions of the pedestal adapted to abut side surfaces of the adjacent rocker arms, since the use would provide a more compact engine, with properly aligned rocker arms.

6. ***Claims 13, 15-16, and 18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Wells et al. (US Patent 4,655,177) in view of Nakamura (US Patent 4,505,236).***

Wells discloses an internal combustion engine comprising: a cylinder block; a cylinder head (12) having a top deck and at least one integrally cast rocker shaft pedestal (24, 36) including a top surface, wherein the top deck is in a same plane as the top surface of the at least one rocker shaft pedestal (See Fig. 1); and a rocker shaft (40) mounted on the at least one rocker shaft pedestal, the rocker shaft having a plurality of rocker arms (42) mounted thereon.

Wells discloses the invention as recited above, however, fails to disclose the rocker shaft includes at least one flat formed on an underside of the shaft adapted for mating with a top of the at least one rocker shaft pedestal.

The patent to Nakamura on the other hand, teaches that it is conventional in the engine rocker shaft support art, to utilize a rocker shaft (128) at least one flat formed on an underside of the shaft adapted for mating with a top of the at least one rocker shaft supporting member (98), in which the at least one rocker shaft supporting member includes a pair of opposed sidewalls, each sidewall having a spacing step adjacent a top of the supporting member, which spacing steps are adapted for correctly spacing adjacent rocker arms (130) on each side of the supporting member, in which each sidewall includes a second step formed beneath the spacing step (See Fig. 7).

It would have been obvious to one having ordinary skill in the art at the time the invention was made to have utilized the flat mating surface on the rocker shaft and the

Art Unit: 3748.

spacing steps on the opposed outer side walls of the rocker shaft supporting member as taught by Nakamura, to modify the mating geometric relations between the rocker shaft and the rocker shaft pedestal in the Wells device, since the use thereof would provide a more compact engine with a proper alignment on the rocker arms.

7. ***Claims 7, and 11 are rejected under 35 U.S.C. 103(a) as being unpatentable over Wells et al. (as applied to claim 1) in view of Nakamura (US Patent 4,505,236).***

Wells discloses the invention, however, fails to disclose each sidewall having a spacing step adjacent a top of the pedestal, which spacing steps are adapted for correctly spacing adjacent rocker arms on each side of the pedestal, in which each sidewall includes a second step formed beneath the spacing step.

The patent to Nakamura on the other hand, teaches that it is conventional in the engine rocker shaft support art, to utilize a rocker shaft (128) supported by a supporting member (98), in which the supporting member includes a pair of opposed sidewalls, each sidewall having a spacing step adjacent a top of the supporting member, which spacing steps are adapted for correctly spacing adjacent rocker arms (130) on each side of the supporting member, in which each sidewall includes a second step formed beneath the spacing step (See Fig. 7).

It would have been obvious to one having ordinary skill in the art at the time the invention was made to have utilized the mating relations between the rocker shaft and the rocker shaft supporting member as taught by Nakamura, to modify the mating geometric relations between the rocker shaft and the rocker shaft pedestal, to include a spacing step and a second step on each opposed sidewalls in the Wells device, since

the use thereof would provide a more compact engine with a proper alignment on the rocker arms.

8. ***Claims 22-23, and 25-26 are rejected under 35 U.S.C. 103(a) as being unpatentable over Wells et al. (as applied to claims 21 and 24) in view of Nakamura (US Patent 4,505,236).***

Wells discloses the invention, however, fails to disclose each sidewall having a spacing step adjacent a top of the pedestal, which spacing steps are adapted for correctly spacing adjacent rocker arms on each side of the pedestal, in which each sidewall includes a second step formed beneath the spacing step.

The patent to Nakamura on the other hand, teaches that it is conventional in the engine rocker shaft support art, to utilize a rocker shaft (128) supported by a supporting member (98), in which the supporting member includes a pair of opposed sidewalls, each sidewall having a spacing step adjacent a top of the supporting member, which spacing steps are adapted for correctly spacing adjacent rocker arms (130) on each side of the supporting member, in which each sidewall includes a second step formed beneath the spacing step (See Fig. 7).

It would have been obvious to one having ordinary skill in the art at the time the invention was made to have utilized the mating relations between the rocker shaft and the rocker shaft supporting member as taught by Nakamura, to modify the mating geometric relations between the rocker shaft and the rocker shaft pedestal, to include a spacing step and a second step on each opposed sidewalls in the Wells device, since

Art Unit: 3748

the use thereof would provide a more compact engine with a proper alignment on the rocker arms.

Response to Arguments

9. Applicant's arguments filed on 05/19/2006 have been fully considered but they are not persuasive.

More specifically, regarding the Attorney's contention "pedestal mount 24 does not include "a pair of opposed sidewalls adapted for correctly spacing adjacent rocker arms on each side of the pedestal," as recited in claim 1 (See Page 4, Attorney's Remarks), and "Wells et al. does not disclose or suggest that pedestal mount 24, which the Examiner considers to meet the claimed limitation of a rocker shaft pedestal, includes "opposed outer side walls having substantially flat portions adapted to abut side surfaces of adjacent rocker arms," as recited in claims 21, 24, and 27 (See Page 6, Attorney's Remarks), the Examiner disagrees. As a matter of fact, the Wells reference does disclose a rocker shaft pedestal (24) that includes opposed outer side walls (as shown in Fig. 1) having substantially flat portions adapted to abut side surfaces of adjacent rocker arms (42). In addition, it has been held that recitation that an element is adapted to perform a function is not a positive limitation but only requires the ability to so perform. It does not constitute a limitation in any patentable sense. *In re Hutchison*, 69 USPQ 138.

Furthermore, in response to applicant's argument that there is no suggestion to combine the references, the examiner recognizes that obviousness can only be established by combining or modifying the teachings of the prior art to produce the

Art Unit: 3748

claimed invention where there is some teaching, suggestion, or motivation to do so found either in the references themselves or in the knowledge generally available to one of ordinary skill in the art. See *In re Fine*, 837 F.2d 1071, 5 USPQ2d 1596 (Fed. Cir. 1988) and *In re Jones*, 958 F.2d 347, 21 USPQ2d 1941 (Fed. Cir. 1992). In this instant application, the Wells reference teaches an integrally cast rocker shaft pedestal (24), the Nakamura reference on the other hand, teaches that it is conventional in the engine rocker shaft support art, to utilize a rocker shaft (128) supported by a supporting member (98), in which the supporting member includes a pair of opposed sidewalls, each sidewall having a spacing step adjacent a top of the supporting member, which spacing steps are adapted for correctly spacing adjacent rocker arms (130) on each side of the supporting member, in which each sidewall includes a second step formed beneath the spacing step (See Fig. 7). Accordingly, the Examiner deems that it would have been obvious to one having ordinary skill in the art at the time the invention was made to have utilized the mating relations between the rocker shaft and the rocker shaft supporting member as taught by Nakamura, to modify the mating geometric relations between the rocker shaft and the rocker shaft pedestal, to include a spacing step and a second step on each opposed sidewalls in the Wells device, since the use thereof would provide a more compact engine with a proper alignment on the rocker arms.

Furthermore, regarding the Applicants' argument on the 35 USC 112, First Paragraph rejection to claims 21-27, "Fig. 3 shows top surface 7 of rocker shaft pedestal 3. Fig. 6 shows a flat 23 of rocker shaft 14 abutting top surface 7, which is described in paragraph [18] ", the Examiner disagrees. It appears the element " side

top surface 7 of the pedestal 3." In view of this disclosure, Applicants submit that claims 21-27 do not contain new matter " (See Page 2, Attorney's Remarks), the Examiner disagrees, because the element " side surfaces of the adjacent rocker arms " as claimed in claims 21, 24, and 27 is not a flat 23 of the rocker shaft 14, accordingly, " to abut side surfaces of adjacent rocker arms " after " adapted " in claims 21, 24, and 27 is new matter.

Additionally, in response to applicant's argument that the references fail to show certain features of applicant's invention, it is noted that the features upon which applicant relies (i.e., " Therefore, while the present disclosure mentions that an object of the disclosed system is to reduce the number of components of the engine and that the '875 patent is an example of a multi-piece system compared to which, the disclosed system attempts to utilize fewer components " (See Page 3, Attorney's Remarks) are not recited in the rejected claim(s). Although the claims are interpreted in light of the specification, limitations from the specification are not read into the claims. See *In re Van Geuns*, 988 F.2d 1181, 26 USPQ2d 1057 (Fed. Cir. 1993).

Conclusion

10. THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not

mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

11. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Ching Chang whose telephone number is (571)272-4857. The examiner can normally be reached on M-Th, 7:00 AM -5:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Thomas Denion can be reached on (571)272-4859. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Patent Examiner



Ching Chang



THOMAS DENION
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 3700